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NCDA&CS Agronomic Division www.ncagr.com/agronomi/ (919) 733-2655

Testing of Farm Ponds Helps Ensure Quality

Rick Morris

Thousands of farm ponds throughout North Carolina provide multiple benefits to their owners. Ponds can be for recreation, or they can provide irrigation for crops. Regardless of their purpose, water quality can have a big impact on the intended use.

Ponds stocked with bass, bream, crappie or catfish are investments to be protected. The pH of the water should be monitored and kept in an optimum range. Nutrient levels should be carefully watched to prevent unsightly algal growth. Having the water tested on a yearly basis helps identify nutrient and pH conditions that may cause serious problems.

Ponds used for irrigation should also be tested for quality. Mineral concentrations can cause irrigation equipment to malfunction. Certain chemical properties may also influence the effectiveness of nutrient or pesticide solutions made with pond water.

The Solution Analysis Service of the N.C. Department of Agriculture and Consumer Services tests water to evaluate its quality for a number of agricultural purposes, including fish production, irrigation, hydroponics, pesticide solutions, and watering of livestock or poultry. It is a good way to evaluate water quality before a crop is irrigated and both before and after ponds are stocked with fish.

A typical solution analysis measures pH, total alkalinity, electrical conductivity and water hardness, as well as nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, zinc, copper, boron, molybdenum, chlorine and sodium. It does not measure concentrations of pathogens or pesticides. A staff agronomist reviews lab results and makes relevant comments on usability, hazards and management strategies.

When taking a water sample, use a clean, plastic container. Rinse the container beforehand, but do not wash with detergent. Avoid collecting water from bottom residues or from those at or near the surface. Collect water from several different areas around the pond as far from the bank as possible. Mix all the collected water together in one container. Pour about a pint into a plastic container.

Send the sample to NCDA&CS Agronomic Division Plant/Waste/Solution Section, including a completed solution information sheet and a $4 processing fee for each sample. Information sheets are available from NCDA&CS regional agronomists, county Cooperative Extension offices, the NCDA&CS Agronomic Division in Raleigh, and online at www.ncagr.com/agronomi.

Proper labeling helps speed the time it takes packages to arrive at the lab. It is best to send samples by UPS or Federal Express. Packages sent this way should be addressed to our physical address:

NCDA&CS PLANT/WASTE/SOLUTION LABORATORY
4300 REEDY CREEK RD
RALEIGH NC 27607-6465

If packages must be sent through the U.S. Postal Service, they must be addressed as follows:

NCDA&CS PLANT/WASTE/SOLUTION LABORATORY
1040 MAIL SERVICE CENTER
RALEIGH NC 27699-1040

Test results are posted on the Internet two working days after samples arrive at the lab. Just choose "Find Your Report" from the navigation column on the left side of the page. You will receive a copy of the report in the mail a few days later.

For more information on solution analysis and taking appropriate samples, contact the NCDA&CS regional agronomist for your area. Names of agronomists, their regions and contact information are available online at www.ncagr.com/agronomi/rahome.htm.